

Mineral Industry Surveys

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TUNGSTEN IN JUNE 1999

U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from hydrogen-reduced metal powder, was 25% lower during the first half of 1999 than net production during the same period in 1998, according to the U.S. Geological Survey.

U.S. reported consumption of ferrotungsten, tungsten metal powder, tungsten carbide powder, tungsten scrap, and other tungsten materials during January through May of 1999 was 14% lower than that of the same period in 1998. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. scrap consumption, consumption of intermediate products by material and end use, and U.S. imports and exports for June 1999 will be published in a subsequent issue.

Note

All data in this report have been rounded to no more than three significant digits. Totals and percentages were calculated by using unrounded data.

Update: Defense National Stockpile Center tungsten award

On August 17, the Defense National Stockpile Center (DNSC) announced the results of its June 23 invitation for bids on tungsten ores and concentrates. The DNSC awarded approximately 816 metric tons (1.8 million pounds) of contained tungsten at a provisional price of approximately \$4.1 million to Osram Sylvania Inc. of Towanda, PA (Defense National Stockpile

Center, 1999). The total unit value of the award equaled \$40 per metric ton unit (\$36 per short ton unit). The award represented approximately 60% of the ores and concentrates available for sale during the fiscal year that ends September 30, 1999. The next deadline for bids on the remaining material is 2:00 p.m., local time, on August 31. For further information on DNSC's tungsten sales program, please contact David L. Brown, contracting officer, at (703) 767-5477.

Update: July Prices

Prices for tungsten ore in dollars per metric ton unit from Metal Bulletin are listed below. Prices in dollars per short ton unit were converted from metric ton unit prices and rounded to the nearest dollar. These prices represent combined prices for wolframite and scheelite ores with a minimum tungsten trioxide (WO_3) content of 65%. The prices for July 1 to 31 are as follows:

Low—\$33/metric ton unit WO_3 (\$30/short ton unit WO_3)

High—\$44/metric ton unit WO_3 (\$40/short ton unit WO_3)

Reference Cited

Defense National Stockpile Center, 1999, Stockpile accepts tungsten ores & concentrates offer: Fort Belvoir, VA, Defense National Stockpile Center, August 17, 1 p.

TABLE 1
U.S. SALIENT TUNGSTEN STATISTICS 1/

(Metric tons, tungsten content)

Period	Concentrate			Reported scrap consumption	Intermediate products		
	Reported consumption	Imports for consumption	Stocks, end of period 2/		Net production 3/	Reported consumption 4/	Stocks, end of period 5/
1998: p/							
June	W	284	742	327	767	725	1,510
July	W	330	846	247	689	798	1,340
August	W	178	652	312	854	762	1,410
September	377	115	554	252	814	770	1,330
October	W	108	787	302 r/	723	746	1,360
November	W	158	503	223	680	703	1,400
December	449	811	514	178	621	614	1,340
January-December 6/	3,210	4,750	XX	3,300	9,630	8,980	XX
1999:							
January	W	129	519	170 r/	635 r/	695 r/	1,330 r/
February	W	156	509	186 r/	630	693 r/	1,340
March	W	714	490	172 r/	683 r/	687 r/	1,370 r/
April	W	90	449	172 r/	659 r/	625 r/	1,340
May	W	383	447	162	667 r/	618	1,380 r/
June	W	NA	433	NA	670	NA	1,330
Total 6/	W	NA	XX	NA	3,940	NA	XX

p/ Preliminary. r/ Revised. NA Not available. W Withheld to avoid disclosing company proprietary data; not included in total or year-to-date. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Reported by consumers.

3/ Net production of tungsten metal powder, tungsten carbide powder, chemicals, and other products.

4/ Includes estimates and scrap.

5/ Reported by producers.

6/ Does not include withheld data.

TABLE 2
U.S. PRODUCTION, CONSUMPTION, AND STOCKS OF
AMMONIUM PARATUNGSTATE, BY MONTH 1/

(Metric tons, tungsten content)

Period	Production	Consumption	Stocks, end of period 2/
1998: p/			
June	W	747	448
July	W	657	496
August	W	846	501
September	W	751	531
October	W	796	552
November	W	414	586
December	W	718	603
January-December 3/	838	9,210	XX
1999:			
January	486	795 r/	621 r/
February	W	729 r/	566 r/
March	486	777 r/	526 r/
April	W	695 r/	529 r/
May	499	705 r/	548 r/
June	W	674	644
Total 3/	1,470	4,380	XX

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; not included in total or year-to-date. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Producers and consumers.

3/ Does not include withheld data.

TABLE 3
U.S. PRODUCTION AND STOCKS OF TUNGSTEN PRODUCTS 1/

(Metric tons, tungsten content)

Product	Net production 2/				Stocks at end of period		
	1999				1999		
	1998 p/	May	June	Year to date	1998 p/	May	June
Metal powder	4,600	287 r/	295	1,700	719	728 r/	700
Tungsten carbide powder (made from metal powder)	5,040	380 r/	375	2,240	576	583 r/	577
Cast and crystalline carbide powder; other	W	W	W	W	W	W	W
Chemicals	W	W	W	W	46	71 r/	48
Total 3/	9,630	667 r/	670	3,940	1,340	1,380 r/	1,330

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; not included in total.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Gross production less quantity used to make other products in table.

3/ Does not include withheld data.

TABLE 4
U.S. REPORTED CONSUMPTION OF TUNGSTEN, BY END USE IN 1999 1/ 2/ 3/

(Metric tons, tungsten content)

End use	April	May	Year to date
Steel:			
Tool	W	W	W
Other	13	15	68
Superalloys	28	28	148
Other alloys (excludes steels and superalloys) 4/	W	W	W
Cemented carbides 5/	427 r/	421	2,340
Mill products made from metal powder	109	106	522
Chemical uses	W	W	W
Miscellaneous and unspecified	48	48	239
Total	625 r/	618	3,320

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Does not include materials used in making primary tungsten products.

3/ Includes estimates.

4/ Includes welding and hard-facing rods and materials, wear- and corrosion-resistant alloys, and nonferrous alloys.

5/ Includes diamond bit matrices, cemented and sintered carbides, and cast carbide dies or parts.

TABLE 5
U.S. REPORTED CONSUMPTION AND CONSUMER STOCKS OF TUNGSTEN MATERIALS 1/ 2/ 3/

(Metric tons, tungsten content)

Period	Ferro-tungsten	Tungsten metal powder	Tungsten carbide powder	Scheelite (natural, synthetic)	Tungsten scrap	Other tungsten materials 4/	Total
Consumption:							
1998: p/							
May	41	101	551	--	35	8	736
June	39	88	549	--	41	8	725
July	40	158	553	--	39	8	798
August	41	125	550	--	38	8	762
September	44	139	534	--	45	8	770
October	40	106	552	--	40	8	746
November	39	66	555	--	35	8	703
December	41	62	468	--	35	8	614
January-December	493	1,370	6,560	--	460	97	8,980
1999:							
January	43	108	500	--	34 r/	10	695 r/
February	43	111	497 r/	--	33 r/	9	693 r/
March	45	113	490	--	30 r/	9	687 r/
April	43 r/	116	426 r/	--	31	9	625 r/
May	45	114	420	--	31	9	618
January-May	219	561	2,330	--	158	45	3,320
Stocks:							
1998: p/							
May	12	14	580	--	33	16	655
June	16	17	546	--	36	16	631
July	14	16	648	--	46	16	740
August	18	14	528	--	48	16	625
September	16	28	497	--	41	16	598
October	18	18	523	--	52	16	626
November	15	18	514	--	41	16	604
December	18	17	431	--	36	16	517
1999:							
January	29	25	416	--	28	17	514
February	25 r/	22 r/	403 r/	--	32 r/	16	498 r/
March	27	26	420	--	26 r/	17	515
April	26	24	417	--	23	17	506
May	24	24	412	--	23	18	500

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Does not include materials used in making primary tungsten products.

3/ Includes estimates.

4/ Includes tungsten chemicals.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF TUNGSTEN, BY COUNTRY 1/

(Metric tons, tungsten content)

Period and country of origin	Ores and concentrates	Ammonium tungstates	Ferro-tungsten	Metal powder	Tungsten carbide	Other 2/	Total	Total year to date
1998 p/	4,750	1,920	599	459	944	3,110	11,800	XX
1999:								
March	714	551	93	43	52	327	1,780	2,820
April	90	82	113	30	68	218	600	3,420
May:								
Australia	93	--	--	--	--	--	93	93
Austria	--	--	--	--	(3/)	2	2	14
Belgium	--	--	--	(3/)	--	--	(3/)	1
Bolivia	14	--	--	--	--	--	14	107
Canada	--	--	--	(3/)	27	3	30	196
China	--	102	43	1	24	275	445	2,260
Czech Republic	--	--	--	--	--	--	--	(3/)
Estonia	--	--	--	--	--	--	--	(3/)
France	--	--	--	--	--	(3/)	(3/)	1
Germany	--	--	--	1	9	6	15	107
Hong Kong	--	--	--	--	--	(3/)	(3/)	(3/)
Hungary	--	--	--	--	--	1	1	5
India	--	--	--	--	--	--	--	(3/)
Ireland	--	--	--	--	--	--	--	(3/)
Israel	--	--	--	--	(3/)	1	1	31
Japan	--	--	--	1	(3/)	2	3	17
Kazakhstan	--	--	--	--	--	--	--	447
Korea, Republic of	--	--	--	--	--	--	--	(3/)
Luxembourg	--	--	--	--	8	--	8	16
Mexico	--	--	--	--	--	(3/)	(3/)	14
Mongolia	--	--	--	--	--	--	--	23
Netherlands	--	--	--	--	--	(3/)	(3/)	(3/)
Peru	11	--	--	--	--	--	11	11
Portugal	30	--	--	--	--	--	30	152
Russia	224	--	--	--	--	20	244	718
Rwanda	--	--	--	--	--	--	--	14
Singapore	--	--	--	--	--	(3/)	(3/)	(3/)
South Africa	--	--	--	--	--	--	--	(3/)
Spain	--	--	--	--	--	(3/)	(3/)	(3/)
Sweden	--	--	--	--	--	(3/)	(3/)	(3/)
Switzerland	--	--	--	--	--	(3/)	(3/)	(3/)
Thailand	11	--	--	--	--	--	11	11
United Kingdom	--	--	--	20	--	(3/)	20	114
Total	383	102	43	23	67	312	930	4,350
Total, year to date	1,470	954	328	115	316	1,170	4,350	XX

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other unwrought tungsten, wrought tungsten, calcium and other tungstates, tungsten oxides, tungsten chlorides, other tungsten compounds, ash and residues containing mainly tungsten, and other mixtures of inorganic compounds containing tungsten. Tungsten content estimated in part.

3/ Less than 1/2 unit.

Note: Imports of waste and scrap in May 1999 totaled 108 metric tons, tungsten content.

Source: Bureau of the Census.

TABLE 7
U.S. EXPORTS OF TUNGSTEN, BY COUNTRY 1/

(Metric tons, tungsten content)

Period and country of destination	Ores and concentrates 2/	Ammonium tungstates	Metal powder 2/	Tungsten carbide	Other 3/	Total	Total year to date 4/
1998 p/	10	287	851	1,240	467	2,860	XX
1999:							
March	1	1	37	72	43	154	493
April	1	35	70	88	49	243	736
May:							
Afghanistan	--	--	--	--	--	--	(4/)
Argentina	--	--	--	--	(4/)	(4/)	(4/)
Australia	--	--	1	(4/)	1	2	9
Austria	--	--	--	(4/)	--	(4/)	2
Belgium	--	--	31	--	(4/)	31	90
Bolivia	--	--	--	--	--	--	1
Brazil	--	--	1	1	1	2	12
Canada	--	--	2	17	4	24	104
Chile	--	--	--	--	--	--	3
China	--	--	--	--	(4/)	(4/)	2
Colombia	--	--	--	--	--	--	(4/)
Congo (Kinshasa)	--	--	8	--	--	8	8
Costa Rica	--	--	--	--	--	--	(4/)
Czech Republic	--	--	--	5	--	5	5
Finland	--	--	--	--	--	--	1
France	--	--	2	5	(4/)	7	20
Germany	--	--	35	15	(4/)	51	281
Hong Kong	--	--	--	5	(4/)	5	26
Hungary	--	--	--	--	(4/)	(4/)	4
India	--	--	--	(4/)	6	6	25
Indonesia	--	--	--	(4/)	--	(4/)	(4/)
Ireland	(4/)	--	--	3	--	3	6
Israel	--	--	(4/)	--	1	1	43
Italy	--	--	8	8	(4/)	16	49
Japan	--	--	(4/)	3	2	5	34
Korea, Republic of	--	--	4	1	(4/)	5	11
Luxembourg	--	--	--	--	--	--	(4/)
Macao	--	--	--	--	--	--	(4/)
Malaysia	--	--	--	--	(4/)	(4/)	1
Mexico	--	(4/)	1	(4/)	1	2	14
Monaco	--	--	--	--	--	--	(4/)
Netherlands	--	--	--	21	1	22	53
Netherlands Antilles	--	--	--	--	--	--	(4/)
Norway	--	--	--	--	--	--	(4/)
Philippines	--	--	--	--	(4/)	(4/)	(4/)
Poland	--	--	--	--	--	--	2
Saudi Arabia	--	--	--	--	--	--	(4/)
Singapore	--	--	1	(4/)	(4/)	1	4
South Africa	--	--	--	8	--	8	19
Spain	--	--	--	--	1	1	4
Sweden	--	--	--	--	(4/)	(4/)	69
Switzerland	--	--	3	(4/)	(4/)	3	14
Taiwan	--	--	--	--	(4/)	(4/)	6
Thailand	--	--	--	--	--	--	(4/)
Turkey	--	--	(4/)	--	--	(4/)	1
United Arab Emirates	--	--	--	--	(4/)	(4/)	(4/)
United Kingdom	(4/)	--	4	(4/)	1	6	34
Venezuela	--	--	--	(4/)	1	1	2
Total	(4/)	(4/)	103	93	22	219	954
Total, year to date	3	51	350	350	199	954	XX

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Tungsten content estimated from reported gross weight.

3/ Includes wrought tungsten, ferrotungsten, and other tungstates. Tungsten content estimated in part.

4/ Less than 1/2 unit.

Note: Estimated exports of waste and scrap in May 1999 totaled 107 metric tons, tungsten content.

Source: Bureau of the Census.